

## CLAIMS

We claim:

1. A method for visually programming an automated transaction machine comprising:

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- a) providing a first icon and a second icon on a work space, wherein the first icon corresponds to a first ATM object and the second icon corresponds to a second ATM object; and
- b) creating at least one association between the first and the second ATM objects by visually representing the association between the first and second icons in the work space.
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2. The method according to claim 1, further comprising:
- c) storing in a memory a plurality of instructions that are representative of the association visually represented in the work space.
3. The method according to claim 2, further comprising:

- d) performing a transaction with an automated transaction machine responsive to the instructions.

4. The method according to claim 3, wherein in step (b) creating the association includes providing a visual line between the first and second icons.

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5. The method according to claim 3, wherein in step (b) the association created corresponds to a linking of an event of the first ATM object to a function of the second ATM object.

6. The method according to claim 5, wherein step (b) includes providing a visual representation of the association including at least one visual clue that indicates which of the first and second icons is associated with the event, and which of the first and second icons is associated with the function.

7. The method according to claim 5, further comprising:

- e) triggering the event of the first ATM object; and
- f) performing the function of the second ATM object responsive to the association.

8. The method according to claim 7, wherein in step (f) the function includes having a transaction function device perform an operation.

9. The method according to claim 8, wherein the transaction function device includes a cash dispenser device.

5 10. The method according to claim 9, wherein the second ATM object corresponds to a dispenser ATM object, and wherein in step (f) the operation includes dispensing an amount of cash with the cash dispenser device.

11. The method according to claim 10, wherein the second ATM object further includes a retain function, wherein the method further comprises:

10 g) performing the retain function including having the cash dispenser device retrieve the amount of cash.

12. The method according to claim 7, further comprising prior to step (c):

g) providing a third icon on the work space, wherein the third icon corresponds to a third ATM object; and

- h) creating a second association between the second ATM object and the third ATM object by visually representing the second association between the second and third icons in the work space.

13. The method according to claim 12, wherein the third ATM object includes at least one value, wherein in step (h) the second association created corresponds to a linking of the value to the function, wherein in step (f) the function is performed responsive to the value.

14. The method according to claim 13, wherein the third ATM object corresponds to a transaction data ATM object, wherein the transaction data ATM object is operative to store a plurality of transaction data values that correspond to the transaction, wherein in step (f) the function is performed responsive to at least one of the transaction data values.

15. The method according to claim 14, wherein the transaction data values include an account number for the transaction.

16. The method according to claim 15, wherein the second ATM object corresponds to an authorization ATM object, wherein in step (f) the function includes sending an authorization message to a host system, wherein the authorization message includes an authorization data value that corresponds to at least one of the transaction data values.

17. The method according to claim 13, wherein the third ATM object corresponds to a customer profile ATM object, wherein the customer profile ATM object is operative to store a plurality of customer profile data values that correspond to a user of the automated transaction machine, wherein in step (f) the function is performed responsive to at least one of the customer profile data values.

18. The method according to claim 17, wherein the customer profile ATM object is operative to retrieve the customer profile data values from a data store in operative connection with the automated transaction machine.

19. The method according to claim 13, wherein the second ATM object is representative of a logic ATM object, wherein in step (f) the function includes performing a logical comparison between at least two argument values, wherein one of the two argument values corresponds to the value of the third ATM object, wherein the method further comprises:

- i) triggering an event of the logic ATM object, wherein when the result of the logical comparison is true, a true event of the second ATM object is triggered, and wherein when the result of the comparison is false, a false event of the second ATM object is triggered.

20. The method according to claim 13, wherein the second ATM object corresponds to a printer ATM object, wherein in step (f) the function includes printing indicia with a printer device responsive to the value of the third ATM object.

21. The method according to claim 20, wherein the indicia includes the value of the third ATM object.

22. The method according to claim 13, wherein the second ATM object corresponds to a status and command ATM object, wherein in step (f) the function includes sending a message to a host system, wherein the message includes the value of the third ATM object.

23. The method according to claim 7, further comprising prior to step (f):

g) storing in the memory a plurality of second instructions that are representative of associations visually represented in a second work space, wherein the second ATM object corresponds to a backstage control ATM object, and wherein in step (f) the function includes having the automated transaction machine attempt to load the second instructions.

24. The method according to claim 23, wherein the second work space includes a second backstage control ATM object, and wherein the method further comprises:

h) triggering a director load event of the second backstage control.

25. The method according to claim 24, wherein in step (f) the function further includes attempting to load a web page in a browser.

26. The method according to claim 25, wherein when either the automated transaction machine fails to load the second instructions or the function fails to load the web page, further comprising:

i) triggering a navigate director failed event of the first backstage control ATM object.

27. The method according to claim 24, wherein the second backstage control ATM object includes a timeout value, wherein after the automated transaction machine successfully loads the second instructions and a period of time has elapsed that is greater than the timeout value, further comprising:

i) triggering a screen timeout event of the second backstage control ATM object.

28. The method according to claim 7, wherein the first ATM object corresponds to a back stage control ATM object, wherein in step (e) the event of the first ATM object is triggered by a browser.

29. The method according to claim 27, further comprising prior to step (e):

- (g) triggering of an HTML event of a web page loaded in the browser, wherein in step (e) the event of the first ATM object is triggered responsive to the HTML event.

30. The method according to claim 29, wherein the HTML event corresponds to the clicking of a button in the web page by a user.

31. The method according to claim 7, wherein the second ATM object corresponds to a back stage control ATM object, wherein in step (f) the function includes loading a web page in the browser.

32. The method according to claim 12, wherein in step (h) the second association created corresponds to a linking of an event of the third ATM object to a second function of the second ATM object.

33. The method according to claim 32, further comprising prior to step (c):

- i) providing a fourth icon on the work space, wherein the fourth icon corresponds to a fourth ATM object; and



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- j) creating a third association between the second ATM object and the fourth ATM object by visually representing the third association between the second and forth icons in the work space, and wherein the third association created corresponds to a linking of an event of the second ATM object to a function of the fourth ATM object.

34. The method according to claim 33, wherein the second ATM object corresponds to a sync ATM object, wherein the second ATM object includes at least one sync timer and at least one sync timeout property, wherein the method further comprises:

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- k) triggering the event of the first ATM object; and
- l) starting the sync timer of the second ATM object responsive to the first association.

35. The method according to claim 34, further comprising:

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- m) triggering the event of the third ATM object within in a period of time before the sync timer reaches the timeout value;
- n) performing the second function of the second ATM object responsive to the second association;

- o) triggering the event of the second ATM object, wherein the event of the second ATM object corresponds to one of a plurality of sync events; and
- p) performing the function of the fourth ATM object responsive to the third association.

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36. The method according to claim 34, further comprising:

- m) reaching the timeout value with the sync timer prior to the event of the third ATM object being triggered;
- n) triggering the event of the second ATM object, wherein the event of the second ATM object corresponds to one of a plurality of sync events; and
- o) performing the function of the fourth ATM object, responsive to the third association.

37. The method according to claim 36, wherein in step (o) the function of the fourth ATM object includes having a transaction function device perform an operation.

38. The method according to claim 37, wherein the transaction function device includes a cash dispenser device, wherein the first, third, and fourth ATM objects correspond to a cash dispenser ATM object, wherein the event of the first ATM object corresponds to the dispense of an amount of cash by the cash dispenser device, wherein the event of the third ATM object corresponds to the taking of the amount of cash by a user from the cash dispenser device, wherein the operation corresponds to retaining of the amount of cash by the cash dispenser device.

39. Computer readable media operative to cause a computer to carry out the method steps recited in claim 1.